REMARKS

Claims 1-11 and 27-28 are pending.

The Examiner has objected to the abstract for Applicant's use of the acronym "GPU." Applicant has submitted an amended abstract replacing the acronym with the full phrase "Graphics Processing Unit."

The Examiner has rejected claims 1 and 7 under 35 USC § 112 for insufficient antecedent basis. Applicant has amended those claims as suggested by the examiner. However, no substantive amendment has been made to any claim.

The Examiner has rejected all pending claims under 35 USC § 102 in view of Brotsky (U.S. 5,490,246). Applicant respectfully traverses the rejection because Brotsky does not teach techniques for combining nodes or fragment programs in any sense. Rather, Brotsky discusses a user interface for graphics systems: "[a] gaphics editor generates an Appearance Construction Graph (ACG) which represents an image formation process as a Directed Acyclic Graph (DAG). Accordingly, the displayed ACG is a user interface that permits complex graphics images to be constructed in a straightforward manner, and thus easily understood and manipulated (edited) by an operator." Brotsky, Abstract.

All the Examiner's citations to Brotsky relate to Brotsky's description of its graphical system for representing an image. Thus, the Examiner's citations to Brotsky are misplaced, in that Brotsky merely discusses combining (really processing) two *image fragments* using a single "transform" (Applicant assumes that the Examiner has analogized a Brotsky transform to a node and while Applicant does not agree with the analogy it is discussed to help achieve clarity). *Image fragements* are images (usually pixels), which is not even similar to a *fragment program*, which is software.

Alternatively, Applicant's claims relate to an "efficiency technique . . . to optimize the graph by eliminating unnecessary nodes," Application Paragraph 79. In particular, the optimization relates to either combining nodes (as in independent claim one), or combining fragment programs (as in independent claim 7). Thus Applicant's claims relate to combing functions ("there are functional nodes that represent computational functions (e.g. operators)," Application, Paragraph 36). Assuming arguendo, that the Examiner's analogy between

"transforms" and "nodes" is accurate, Brotsky does not discuss or disclose techniques for combining "transforms." Brotsky merely discusses the GUI representation of "transforms" noting and describing that a "transform" may represent the combination of *images* (see for example, column 10, lines 20-25 noting applying "combination" to "image fragments" – NOT FUNCTIONS, PROGRAMS OR SOFTWARE ELEMENTS).

In particular, with respect to Claim 1:

- Brotsky does not discuss or teach or suggest "determining whether an output buffer of said first node will comprise data that is similar to an input texture of said second node." As discussed above, Brotsky doesn't discuss combinations of nodes at all so there is no analysis regarding outputs and inputs according to the claim either in the Examiner's cited sections or elsewhere;

- Botsky is a user interface patent and does not teach (either in the cited portions or elsewhere) examining program lines for any purpose and certainly not for the claimed purpose "to determine if it negates the possibility of combining nodes."

- As explained above, since Brotsky does not teach or suggest combining nodes. Examiner's reference to Brotsky's "removing edges between the nodes" is a discussion regarding a GUI technique (physically deleting the links) that effectively *disassociates* two "transforms" under Brotsky's teaching. The removal of the link does not combine the "transforms" nor is there any suggestion of such. Furthermore, the Examiner's citation to "the editor runs a graph traversal algorithm" refers to running the programs to create the image, NOT any technique for combining nodes as claimed (Brotsky isn't even concerned with optimizing the graph, much less any technique for doing so).

Moreover, in view of the distinction to claim 1, the same applies to all claims depending thereon (claims 2 – 6 and 27). In addition, Applicant traverses the Examiner's rejection of these dependent claims and reserves the right to elaborate on specific distinctions; however such elaboration may be unnecessary in view of the distinction of independent claim 1.

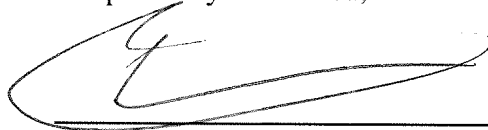In particular, with respect to Claim 7:

- Brotsky does not discuss or teach or suggest "[d]etermining whether an output of the first fragment program represents relevant pixels that are the same a pixels represented by an input of the second fragment program." As discussed above, Brotsky doesn't discuss combinations of programs at all so there is no analysis regarding outputs and inputs according to the claim either in the Examiner's cited sections or elsewhere;

- Botsky is a user interface patent and does not teach (either in the cited portions or elsewhere) examining program lines for any purpose and certainly not for the claimed purpose "to determine if it negates the possibility of combining said two programs."

- As explained above, since Brotsky does not teach or suggest combining nodes. Examiner's reference to Brotsky's "removing edges between the nodes" is a discussion regarding a GUI technique (physically deleting the links) that effectively *disassociates* two "transforms" under Brotsky's teaching. The removal of the link does not combine the "transforms" nor is there any suggestion of such. Furthermore, the Examiner's citation to "the editor runs a graph traversal algorithm" refers to running the programs to create the image, NOT any technique for combining nodes as claimed (Brotsky isn't even concerned with optimizing the graph, much less any technique for doing so).

Moreover, in view of the distinction to claim 7, the same applies to all claims depending thereon (claims 8 – 11 and 28). In addition, Applicant traverses the Examiner's rejection of these dependent claims and reserves the right to elaborate on specific distinctions; however such elaboration may be unnecessary in view of the distinction of independent claim 7.

Having responded to all of the Examiner's rejections and objections, Applicant believes the case is in condition for allowance. However, if the Examiner wishes, Applicant invites the Examiner to call the undersigned with respect to any questions pertaining to this application (832/446-2415).

Respectfully submitted,

7/17/06
Date

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